CONTENTS OF VOLUME II.

VII. JULY–AUGUST, 1894.

PAGE

Frontispiece: Portrait of Professor Kundt.

A Bolometric Study of Light Standards. *Clayton H. Sharp and W. R. Turnbull* . 1

On a Relation between Specific Inductive Capacity and Chemical Constitution of Dielectrics. *Charles B. Thwing* 35

Minor Contributions: (1) The Physical Laboratory of Adelbert College, *Frank P. Whitman;* (2) A Laboratory Experiment in Simple Harmonic Motion, *John O. Reed;* (3) Some Experiments in Electric Photography, *Fernando Sanford;* (4) The Electrical Conductivity of Copper as affected by the Surrounding Medium (a discussion), *Fernando Sanford and Henry S. Carhart* 53

Note: August Kundt 68

New Books: *Pascal:* Récit de la Grande Expérience de l'Equilibre des Liqueurs. *Kirchhoff:* Vorlesungen über mathematische Physik. *Poynting:* The Mean Density of the Earth 70

VIII. SEPTEMBER–OCTOBER, 1894.

On the Solution-Tension of Metals. *Harry C. Jones* 81

On Electric Strength. *G. W. Pierce* 99

A General Theory of the Glow-Lamp. I. *H. S. Weber* 112

A Reliable Method of Recording Variable Current Curves. *Albert C. Crehore* . . 122

Minor Contributions: (1) A New Form of Spectrophotometer, *Edward L. Nichols;* (2) A Phonographic Method for recording the Alternating Current Curve, *C. J. Rollefson;* (3) On the Resistance offered by a Medium contained between Spherical Surfaces and their Mercatorial Projections, *Edwin J. Houston and A. E. Kennelly* . 138

New Books: *Cajori:* History of Mathematics. *Heaviside:* Electromagnetic Theory, Vol. I. *Preston:* Theory of Heat. *Harkness and Morley:* A Treatise on the Theory of Functions. *Ram:* The Incandescent Lamp and its Manufacture. *Geipel and Kilgour:* Electrical Engineering Formulæ 146

IX. NOVEMBER–DECEMBER, 1894.

Frontispiece: Portrait of Professor von Helmholtz.

Studies of the Lime Light. *Edward L. Nichols and Mary L. Crehore* 161

A Study of the Residual Charges of Condensers and their Dependence upon Temperature. *Frederick Bedell and Carl Kinsley* 170

A General Theory of the Glow-Lamp. II. *H. S. Weber* 197

Minor Contributions: (1) On the Thermal Conductivity of Cast Iron as a Function of Temperature, *I. Thornton Osmond;* (2) On Some Magnetic Characteristics of Iridium, *S. H. Brackett* 211

Notes: (1) Hermann von Helmholtz; (2) The American Association for the Advancement of Science 222

New Books: *Greenhill:* A Treatise on Hydrostatics. *Hellman:* Schneekrystalle Beobachtungen und Studien. Recent Text-books in Heat. *Nichols:* A Laboratory Manual of Physics and Applied Electricity. *Ram:* The Incandescent Lamp and its Manufacture 229

X. JANUARY–FEBRUARY, 1895.

PAGE

The Apparent Forces between Fine Solid Particles Totally Immersed in Liquids. I. *W. J. A. Bliss* 241

The Distribution of Energy in the Spectrum of the Glow-Lamp. *Edward L. Nichols* 260

The Influence of Heat and the Electric Current upon Young's Modulus for a Piano Wire. *Mary C. Noyes* 277

Minor Contributions: (1) On Magnetic Potential, *Frederick Bedell;* (2) A Method for the Study of Transmission Spectra in the Ultra-violet, *Ernest Nichols;* (3) The Photography of Manometric Flames, *William Hallock* 298

New Books: *Frost:* A Treatise on Astronomical Spectroscopy; a translation of Die Spectralanalyse der Gestirne, by J. Scheiner. *Du Bois:* Magnetische Kreise, deren Theorie und Anwendung. *Glazebrook:* Light; an Elementary Text-book, Theoretical and Practical, for Colleges and Schools. *Ewing:* The Steam Engine and Other Heat Engines. *Greaves:* A Treatise on Elementary Hydrostatics. Recent Text-books in Laboratory Physics. *Price:* A Treatise on the Measurement of Electrical Resistance 308

XI. MARCH–APRIL, 1895.

On the Attractions of Crystalline and Isotropic Masses at Small Distances. *A. Stanley Mackenzie* 321

The Influence of Temperature upon the Transparency of Solutions. *Edward L. Nichols and Mary C. Spencer* 334

Determination of the Electric Conductivity of Certain Salt Solutions. *Albert C. MacGregory* 361

The Apparent Forces between Fine Solid Particles Totally Immersed in Liquids. II. *W. J. A. Bliss* 373

Minor Contributions: (1) Surface Tension of Water at Temperatures below Zero Degree Centigrade, *W. J. Humphreys and J. F. Mohler;* (2) Variation of Internal Resistance of a Voltaic Cell with Current, *H. S. Carhart* 392

New Books: *Ostwald:* Manual of Physico-Chemical Measurements; translated by J. Walker. *Lodge:* The Work of Hertz and Some of his Successors. *Zwet:* An Elementary Treatise on Theoretical Mechanics. *Miethe:* Photographische Optik ohne mathematische Entwickelungen für Fachleute und Liebhaber. Proceedings of the International Electrical Congress. The American Annual of Photography and Photographic Almanac 400

XII. MAY–JUNE, 1895.

The Capacity of Electrolytic Condensers. *Samuel Sheldon, H. W. Leitch, and A. N. Shaw* 401

Thermal Conductivity of Copper. I. *R. W. Quick, C. D. Child, and B. S. Lanphear* . 412

On the Absorption of Certain Crystals in the Infra-red as Dependent on the Direction of the Plane of Polarization. *Ernest Merritt* 424

Resonance in Transformer Circuits. *F. Bedell and A. C. Crehore* 442

On the Secular Motion of a Free Magnetic Needle. I. *L. A. Bauer* 455

Minor Contributions: A New Method for Testing the Magnetic Properties of Iron, *W. S. Franklin;* Notes on a Phenomenon in the Diffraction of Sound, *W. S. Franklin* 466

New Books: *Rayleigh:* Theory of Sound, Vol. I. *Poincaré:* Les Oscillations Électriques. *Carhart:* University Physics. *Prestwich:* Collected Papers on Some Controverted Questions in Geology. *Geikie:* Memoir of Sir Andrew Crombie Ramsay 471